Last Updated: January 2013

Supplement to DCM

The Design and Construction Manual is hereby changed. The following articles are added or replace those in the 2006 and 2009 editions. All other articles remain applicable.

2.4 Special Statutory Requirements

C. Major statutory requirements include:

9. Domestic Products Act

Appendix 1 STATUTORY REQUIREMENTS

9. Procurement of Domestic Products Act

9.1. The Procurement of Domestic Products Act, 30 ILCS 517/30, requires each purchasing agency making purchases of procured products to promote the purchase of and give preference to manufactured articles, materials, and supplies that have been manufactured in the United States.

9.2. "Manufactured in the United States" means, in the case of assembled articles, materials, or supplies, that design, final assembly, processing, packaging, testing, or other process that adds value, quality, or reliability occurs in the United States.

9.3. The Capital Development Board is exempt from the requirements of this Act with respect to a specific project if (i) the project is too complex to identify the numerous individual procured products required for the project or (ii) the procured products required for the project are too numerous or complex to be able to efficiently assess the sites where manufactured.

9.4. The A/E shall complete the following form to indicate whether the project as described in the project manual, specifications and drawings is too complex or the products are too numerous or complex to meet the intent of the Act or if the promotion and preferences required are being applied to the project. This form will be submitted with the 100% design review submittal.

DOMESTIC PRODUCTS ACT FORM

Public Act 94-0540 (30 ILCS 517/30)

Project Number: _____

Description: _____

Location: _____

Agency Name: _____

Project Manager: _____

Per the Domestic Products Act, CDB is required to promote the purchase of and give preference to manufactured articles, materials, and supplies that have been manufactured in the United States.

According to the Act a product manufactured in the U.S. is defined as "...in the case of assembled articles, materials, or supplies, that design, final assembly, processing, packaging, testing, or other process that adds value, quality, or reliability occurs in the United States".

The Capital Development Board is allowed an exemption with respect to this requirement for individual projects if (i) CDB determines that the project is too complex to identify the numerous individual procured products required for the project or (ii) CDB determines that procured products required for the project are too numerous or complex to be able to efficiently assess the sites where manufactured.

As the A/E of record, our determination is:

☐ **The project as described in the project manual, specifications and drawings is too complex or the products are too numerous/ complex to meet the Act.**

☐ **The promotion and preferences required are being applied to the project.**

Explanation, if necessary:

_____ _____

A/E's Signature Printed Name

_____ _____

Firm Name Date

_____ _____

CDB Lead Reviewer's Signature Date

PROJECT MANUAL WORKBOOK for ASBESTOS, LEAD, UST and PCB

June 2012

Illinois Capital Development Board

TABLE OF CONTENTS

Article 1 PROJECT MANUAL WORKBOOK FOR ASBESTOS, LEAD, UST & PCB

1.1 General. This workbook has been prepared for use with the current edition of the "Standard Documents for Construction" (SDC) and this "Design & Construction Manual."

1.2 Material Included. This manual/workbook contains instructions and forms. Guide specification sections available on CDBs website are the minimum requirements for the preparation of the specific Project Manual sections. However, the material in this workbook, including instructions, is mandatory.

Instructions to the A/E reference the Associated Regulatory Requirements.

1.3 CDB's Web Site. CDB documents, forms and publications are available on CDB's web site Reference Library (www.cdb.state.il.us).

Article 2 ASBESTOS PROJECTS

2.1 General. Asbestos abatement requires compliance with regulatory requirements and the use of Illinois Department of Public Health (IDPH) licensed personnel. Each A/E shall comply with the following procedures if asbestos is encountered.

2.2 Administration.

A. CDB shall assign a Project Manager (PM) for all abatement projects. The PM's will coordinate with the A/E, CDB staff and the User for asbestos projects including inspections, sampling, management plan and abatement design required for remodeling/rehabilitation projects.

B. The A/E shall design the abatement of asbestos (ACM) to minimize asbestos exposure to all individuals involved in the project. This includes building occupants, contractors, employees, and A/E staff.

   If an A/E encounters asbestos during a routine remodeling project and the A/E does not employ licensed staff as described above, the A/E shall contract with a CDB prequalified firm to provide the necessary asbestos abatement services.

C. All bulk samples for analysis shall be collected by IDPH-licensed Building Inspectors. All inspection, sampling and management planning services shall comply with the A/E Manual of Procedures for Asbestos Inspections and Management Plans (Asbestos Protocol).

2.3 Design Criteria

A. Rules and regulations for asbestos abatement promulgated by the IDPH shall be used for asbestos abatement: Rules for Asbestos Abatement for Public and Private Schools and Commercial and Public Buildings (77 Ill. Admin. Code 855, Subpart E). This includes the same format for abatement Completion Reports [855.170(a)(5)] (APM Report). Variances shall be approved in writing by CDB (and IDPH, if the project involves elementary or secondary schools) with the following exceptions:

1. All projects not under IDPH jurisdiction shall utilize a dual role APM/ASP unless otherwise directed by CDB.

2. All tent enclosures shall require a minimum 6-hour hang time.

3. All floor tile and floor tile mastic abatement projects not under IDPH jurisdiction shall utilize a single layer of poly sheeting on wall surfaces, unless otherwise directed by CDB.

4. All projects not under IDPH jurisdiction shall utilize PCM clearance, unless otherwise directed by CDB.

5. All projects which involve demolition of an unoccupied facility shall follow applicable IEPA & NESHAP regulations.

6. All non-friable, floor tile abatement projects not under IDPH jurisdiction shall require a specific variance from CDB. CDB will require engineering controls during abatement, area air monitoring, clearance air monitoring and notification of all non-friable projects.

7. The APM Final Report shall include documentation of medical clearance for all supervisors, workers and the APM/ASP.

B. All asbestos abatement work will be performed using appropriate respiratory protection in accordance with applicable OSHA regulations (29 CFR 1910.134; 29 CFR 1910.1001; 29 CFR 1926.103 and 29 CFR 1926.1101).

2.4 Preliminary Design Phase

A. For an asbestos abatement project, the A/E's Preliminary Design Phase Services are modified as follows. Whenever Inspection and sampling has not previously occurred, the A/E shall provide inspection and sampling prior to the preliminary design. The documents shall be prepared in accord with CDB's *A/E Manual of Procedures for Asbestos Inspections and Management Plans.*

B. A Management Plan may be required if all of the identified asbestos is not removed during construction.

2.5 Bidding Documents Phase

A. CDB has developed guide specifications sections, edited versions of which may be used as appropriate by the A/E on abatement projects.

B. The A/E shall coordinate with the building user to determine when abatement may occur.

C. If the abatement work is less than the small project threshold (verify with CDB project manager) or more than $15M single prime contract, the asbestos work may be done by a subcontractor. All other abatement work will be a separate trade assigned to the coordinating contractor.

D. Any variance request must be approved in writing by CDB, and IDPH when applicable, prior to being incorporated in the plans and specifications by the A/E.

E. The A/E shall consider notification and other regulatory requirements in determining the construction schedule.

2.6 Construction Phase

A. The A/E shall provide an Asbestos Project Manager/Air Sampling Professional (APM/ASP) whose full-time responsibility during construction shall be monitoring the asbestos contractor's or subcontractor's methods and procedures to ensure all specified rules and regulations for abatement are followed. The APM/ASP shall be licensed as defined in the IDPH Rules and Regulations.

B. The Asbestos Project Manager/Air Sampling Professional (APM/ASP) shall be inside containment a minimum of two hours each half day of work. The APM/ASP may spend additional time in containment whenever air sampling indicates higher than normal fiber counts, or during cleaning periods prior to final clearance to verify all ACM has been properly removed. Failure of the APM/ASP to comply with the above will result in a decrease in the payment to the A/E for the APM/ASP services.

C. The A/E will submit copies of the APM FINAL REPORT to the Contractor, CDB, IDPH (when applicable) and two copies to the Using Agency within 60 days of final clearance testing. All APM Final Reports shall be submitted in electronic .pdf format.

D. Required Air Sampling:

1. Maximum of seven (7) samples/day per contained work area which includes: two (2) inside work area, two (2) outside work area, one (1) at the negative air, one (1) field blank, one (1) lab blank for 02 82 13 projects. All OSHA samples are the contractor's responsibility (for AHERA follow IDPH rules).

2. Maximum of three (3) samples for glovebag tent enclosures.

3. Non friable projects:
   a. representative sample of worker exposure.
   b. minimum one day for each work activity.

E. All air monitoring is to be conducted as per IDPH Rules and Regulations.

F. Air monitoring procedures for glovebag removal is to be conducted following IDPH Section 855.480 of IDPH Rules and Regulations.

G. Personal air monitoring for CDB Projects is the contractors' responsibility under OSHA Regulations. Only AHERA projects under IDPH jurisdiction will have personal sampling performed as part of CDB's responsibility.

2.7 References

A. Sample Specification Section 02 82 11 - Minor Demolition for Non-friable Asbestos Removal
B. Sample Specification Section 02 82 13 - Asbestos Abatement
C. Sample Specification Section 02 82 15 - Minor Demolition for Non-friable Asbestos Roof Removal

2.8 Attachments.

A. Asbestos Abatement Estimate Outline Form with Instructions (Capital Development Board)
B. APM Report Requirements

GUIDELINES FOR ESTIMATING
ASBESTOS ABATEMENT PROJECTS

The attached listing of asbestos abatement work items are provided as a guideline for use in preparing cost estimates during the design phase. It should be used as appropriate; modified, or supplemented when required. The A/E is responsible for the estimate and these guidelines should not be construed as inclusive or the only method which may be used. An estimate of comparable detail is required regardless. Be sure to include asbestos costs on CDB's Proposed Project Cost Budget (PPCB) form.

- Preparation - All costs for mobilization, set-up and area preparation prior to removal of any ACM. Note the inclusion of work items for demolition of non-contaminated building components to gain access to ACM. Verify that this demolition work is truly not contaminated by asbestos prior to including the costs in this section.

- Architectural Systems - This section is for cost of removal of ACM encountered in architectural systems or work normally installed as general work.

- Thermal Systems - This section is for cost of removal of ACM encountered in work originally installed as part of HVAC work, usually by the insulation subcontractor.

- Equipment Rental - The costs of capital equipment used on the project by the contractor. Either direct rental costs or allocation of costs for equipment owned by the contractor.

- Final Clean-up & Restoration All costs, after removal of the bulk of the ACM to perform final removal and clean up, dismantling, and demobilization required to restore the facility for the owner's use.

- General Conditions - Project costs required by the general conditions and typically estimated by the size and/or duration of the project.

- Recapitalization - For summarizing the costs on the previous sections and adding insurance overhead, profit and contingency.

ESTIMATE RECAPITULATION

PROJECT ASBESTOS ABATEMENT ESTIMATE OUTLINE — ESTIMATE NO.

LOCATION — SHEET NO.

ARCHITECT/ENGINEER — DATE

SUMMARY BY — PRICES BY — CHECKED BY

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ESTIMATED MATERIAL COST	UNIT PRICE	TOTAL ESTIMATED LABOR COST	UNIT PRICE	TOTAL
Preclean		Square Ft.						
Protection		Square Ft.						
Temp. Partitions		Square Ft.						
Polyethylene		Square Ft.						
Remove Plaster		Square Ft.						
Remove Drywall		Square Ft.						
Remove Ceiling Tile		Square Ft.						
Remove & Clean Light Fixtures		Each						
Protect Grills & Registers		Each						
Remove Fireproofing		Square Ft.						
Remove Boiler Insulation		Square Ft.						
Remove Pipe Insulation by Size		Lineal Ft.						
Abate Fittings by Size		Each						
Remove Breaching of Flue Insul		Square Ft.						
Remove Duct Insulation by Size		Lineal Ft.						
Glove Bags		Each						
Remove V.A.T.		Square Ft.						
Remove Mastic with Solvent		Square Ft.						
Remove Mastic Bead Blast		Square Ft.						
Remove Transite Pipe by Size		Lineal Ft.						
Remove Transite Board		Square Ft.						
Remove Contaminated Soil		S.F. / C.Y.						
Load & Haul Waste		Loads						
Dump Fee		Cubic Yd.						
Final Clean		Square Ft.						
Reinsulation Pipe or Duct by Size		Linear Ft.						
Reinsulate Fittings by Size		Each						
Patch Fireproofing		Square Ft.						
Encapsulate		Square Ft.						
Equipment (Pre-List)		Each						
Scaffolding Per Job								
Highlift								
Electrical with Lighting								
Mechanical - Heat, Vent & Plumb								
General Conditions								
Overhead & Profit								
Bond & Insurance								
CAF								

APM FINAL REPORT REQUIREMENTS

Within 60 days of final clearance testing, the Asbestos Project Manager will submit the Final Report to the following:

A/E:	1 copy
Contractor:	1 copy
Using Agency:	2 copies
CDB:	1 copy
I.D.P.H.:	1 copy (if applicable)

The A/E shall distribute the reports in electronic format with letters of transmittal sent to the CDB Project Manager.

Reports for IDPH-regulated projects shall be submitted on hard-copy, unbound, with tabs. The following information shall be provided on the front cover sheet:

Job Title	Building Name		Building No.
CDB Project Number			
Using Agency	City	County	State
APM/ASP	Name and Address		
Project Designer	Name and Address		Seal and Signature
Date	Date of Final Clearance		
CDB Logo			

The Final Report is to have a Table of Contents. Each Section of the Report is to be tabbed and titled. Pages within each Section are to be numbered. The report shall follow the IDPH format, shall be submitted to CDB and to the Using Agency in an electronic format and shall include the following:

Section A) Project Manager's Report Form provided by IDPH.

Section B) Items submitted by the Contractor under Section 833.350(a).

Section C) For clearance air samples, include the location of the sample, start and end times of sampling, sampling air flow rate, volume of air sampled, name and address of laboratory performing the analysis and name and address of the analyst.

i) When final air clearance monitoring samples are analyzed by a laboratory using TEM, include a copy of the NVLAP certificate for airborne fiber analysis for the laboratory.

ii) When final air clearance monitoring samples are analyzed by PCM in a laboratory, include a copy of the Proficiency analytical Testing (PAT) program's year-to-date performance report for the laboratory.

iii) When final air clearance monitoring samples are analyzed by an analyst outside of a laboratory, include a copy of the report of the performance testing under the Asbestos Analyst Registry (AAR) Program for the analyst for the testing round completed prior to the completion of the project, but not after the completion of the project.

Section D) Names, license numbers, current training certificates and medical clearance certificate for asbestos abatement workers who conducted the abatement.

Section E) Name, address and license number of the asbestos contractor.

Section F) Names, addresses, license numbers, initial and current training certificates and certificate of medical clearance for the project designer, project manager and contractor's supervisor(s) and signature of the project manager.

Section G) Name, signature and license number of each air sampling professional.

Section H) Log of negative pressure measurements taken by the contractor for contained areas. The readable tape for the manometer shall serve as the log. This is only applicable to IDPH-regulated projects.

Section I) Variance requests submitted to CDB and/or IDPH and the responses to those requests.

Section J) Locations, times and results of background, personal and area air samples taken prior to and during the project.

Section K) A detailed description, diagram or blueprint indicating the location of ACBM abated, locations of barriers and locations of decontamination enclosures.

Section L) A detailed description of the project, including abatement methods employed, reasons for the project and for the selection of abatement methods, description of types and amounts of ACBM abated, and start and completion dates of the project.

Section M) Daily log of observations made by the project manager, including a description of project activities, documentation of smoke-testing of barriers by the contractor, documentation of post-abatement visual inspection of each work area, and description of procedures used during clearance air sampling.

Section N) Items submitted by the contractor under Section 855.350(c)(d).

Section O) For cleaning performed in accordance with Sections 855.400(f)(1)(A), (D) and (E), include the names of persons performing the cleaning, the date and locations of the cleaning and the methods used.

Article 3 GUIDELINES FOR LEAD

3.1 General

The majority of paint manufacturers utilized lead (Pb) paint formulations prior to 1978. In 1978, the use of lead-based paint for residential use was banned; in 1990 lead-based paint was prohibited for CDB projects. Most paints today do not contain quantities of lead sufficient to be categorized as lead-based coatings; however, there are still some paints which do contain sufficient lead to be categorized as lead-based.

3.2 Sampling (paint chip) & Testing (XRF)

As required by the Professional Services Agreement, the A/E shall provide for the selective testing of materials to be affected by the project. The A/E shall recommend to CDB the number of samples to be taken, and written approval shall be issued by the CDB Project Manager prior to testing. Existing materials integral to the project shall be tested, as well as any adjacent materials that are affected by the construction. Such materials shall be categories as CDB recommends: walls, ceilings and trim (windows, doors and frames) - 5 samples per category. Sampling shall be conducted by a licensed inspector. If sample analysis is required, then the laboratory used shall be accredited by the Environmental Lead Laboratory Accreditation Program.

Paint containing more than five-tenths of one percent (½% or 0.5%) lead by weight is considered lead-based paint (LBP). Costs incurred in the sampling and testing of materials are reimbursable expenses. Results of the testing shall be included in Section 02 83 19 of the Project Manual.

3.3 Design

Should testing indicate the presence of LBP, regulations established by the Occupational Safety and Health Administration (OSHA) and the Illinois Environmental Protection Agency (IEPA) are applicable to the project. If the project site is utilized for either public housing or for day care purposes, then guidelines established by the U.S. Department of Housing and Urban Development (HUD) are applicable as well.

In the project documents, identify all LBP. The A/E shall indicate in 01 11 00.2.B. of the Project Manual the existing conditions where lead paint is located. See the attached example. Specify remediation in Section 02 83 19 Lead-Based Paint Removal. IDPH notification is required only in residential and day care projects.

If asbestos abatement activities are being conducted in conjunction with lead remediation, then the A/E shall maximize all opportunities to combine similar activities and equipment items such as containment barriers and negative-air machines.

Clearance sampling shall be required following all LBP-related activities and shall conform to current HUD requirements. All interior LPB removal shall be conducted within containment areas. Critical barriers shall be maintained, drop cloths shall be utilized on floors and additional protection of adjacent finishes shall be provided as necessary. If removal is to occur adjacent to an occupied area, or if the site is to be re-occupied, then negative air pressure is required within the containment area. Containment utilizing opaque barriers may be required for all exterior removal

3.4 Construction

The Lead Construction Standard (OSHA 1926.62) has been in effect since June 4, 1993 and all construction activities shall be conducted in accord with this standard. The permissible exposure limit (PEL) for lead is 50 micrograms per cubic meter ($\mu g/m^3$) and the action level is 30 $\mu g/m^3$. Both levels are for an 8-hour time weighted average (TWA). The OSHA standard also requires contractors to perform an exposure assessment for each project. It is the responsibility of the A/E to provide on-site representation during the critical activities.

3.5 Disposal

If demolition/construction debris containing LBP still adhered to the substrate is generated from a non-residential structure, the waste may be handled as general refuse. However, if the LBP is removed from the original substrate to which it was adhered, then the waste is a special waste. The waste shall be analyzed by the Toxicity Characteristic Leaching Procedure (TCLP). LBP waste that meets the definition of special waste is hazardous if it has a concentration of lead equal to or greater than 5.0 mg/l as determined by TCLP. In addition, other parameters shall be below the regulatory limits for toxicity and other characteristics and listings. The Resource Conservation Recovery Act (RCRA) establishes LBP regulations. The handling and disposal of hazardous waste shall be conducted in accordance with the RCRA regulations applicable to the activity being conducted. LBP waste shall be stabilized prior to disposal in a facility that is permitted by IEPA to accept the waste.

3.6 Transportation of LBP Waste. Anyone who hauls or transports special waste shall have a current, valid waste hauling permit issued by the IEPA.

Note: Any person who is transporting special waste for a generator who generates less than 100 kilograms (220 pounds) of special LBP waste in a calendar month is exempt from this requirement. The Contractor shall submit all waste manifests to CDB with their respective pay request.

3.7 References

A. IDPH Notice of Commencement, Lead Abatement/Mitigation Project.

3.8 Attachments

A. Section 01 11 00 - Project Summary with Sample Language for Lead Abatement

1. GENERAL

A. STANDARD DOCUMENTS FOR CONSTRUCTION: CDB's (*2006) edition of the "Standard Documents for Construction" shall apply to this project.

B. **IN-HOUSE ARCHITECT/ENGINEER: (OPTIONAL PARAGRAPH) The staff of (*Agency) has prepared the bidding and contract documents for the project and will assume the duties of the A/E described in the Standard Documents for Construction*.

2. **GENERAL PROJECT INFORMATION**A. DESCRIPTION:(*)B. EXISTING CONDITIONS:1. Paint (*) in this project (*location and extent) has been determined to contain lead (Pb) as indicated in the documents. Any work which will disturb the paint (*) shall comply with OSHA 1926.62 (Lead Construction Standard) and EPA disposal regulations including TCLP testing when required.C. RELATED WORK1. WORK BY OTHERS:2. FUTURE WORK:

Article 4 UNDERGROUND STORAGE TANKS

4.1 UST/Regulatory Responsibilities

A. The Office of the State Fire Marshall (OSFM) is charged with enforcing the regulations regarding USTs and ASTs in Illinois. Technical questions regarding USTs or ASTs should be addressed to that office. Permits are issued by the OSFM for tank removal, abandonment and new installations. Fire safety is handled by the Chicago Office of the Fire Marshal.

B. Illinois Emergency Management Agency (IEMA) is notified when a release of product is discovered and forwards this information to the IEPA for eventual enforcement of clean-up. In case of fire hazards or life safety issues, they will be first line of authority.

C. The Illinois Environmental Protection Agency (IEPA) will be involved with site classifications, site remedial activities and final approval of site cleanup.

D. The Capital Development Board is the construction management arm of State government, as such the CDB is involved with A/E selection, contract administration, bid advertisement and project management.

4.2 Contract Person and Phone Numbers

IEPA: Cliff Wheeler or Russ Irwin 217/782-6761
(Environmental requirements)

OSFM: Dale Tanke or Bill Alderson 217/785-5878
(UST removal/installation permits)
Ken Woods 312/814-2693
(Fire safety issues or questions)

IEMA: 17/782-7860 (To report a release from an UST)
Must be reported within 24 Hrs.

CDB: Lisa Mattingly 217/524-6408 (Environmental programs)
Stan Gralnick 217/782-1523 (Programming or funding questions)

4.3 References

A. Sample Specification Section 02 65 00 - Underground Storage Tank Removal
B. Sample Specification Section 02 61 00 - Excavation, Transportation and Disposal of Contaminated Soil
C. Sample Specification Section 02 70 00 - Removal of Contaminated Groundwater
D. Sample Specification Section 33 56 13 - Aboveground Storage Tank Installation

4.4 Attachments.

A. Document 00 41 00 - Bid Form -- Example with Unit Prices for USTs

NAME OF FIRM

FOR (* Trade) WORK

BID FOR: CDB PROJECT NUMBER: (*___-___-_____)

PROJECT TITLE: (*)

BID TO: State of Illinois, Capital Development Board

THE BIDDER ACKNOWLEDGES THE FOLLOWING ADDENDA: (Failure to acknowledge may cause bid rejection.)

NO._____, DATED _____ NO._____, DATED _____ NO_____, DATED_____

NO._____, DATED _____ NO._____, DATED _____ NO_____, DATED_____

EACH BID SHALL INCLUDE:

A. THE BID FORMS, INCLUDING THE PC-2 FORM (00 41 04) AND THE MBE/FBE FORM (00 41 05)).
B. BID SECURITY (00 41 06)
C. PRODUCT SUBSTITUTION FORM (00 41 07) (at Bidder's option)

*UNIT PRICES: ITEM DESCRIPTION	UNIT OF COST	ESTIMATED QUANTITY		UNIT PRICE		COST EXTENSION
1. *02 61 00-Excavating, Transporting, & Disposal of Contaminated Soil	(*Ton)	(*)	X	$	=	$
2. *02 70 00-Removal of Contaminated Water	(*Gal.)	(*)	X	$	=	$
3. *312323-Additional Backfilling & Compacting	(*CY)	(*)	X	$	=	$
4. *CONTINUE AS APPROPRIATE	(*)	(*)	X	$	=	$

SUM OF ALL UNIT PRICE COST EXTENSIONS (TO BE INCLUDED IN THE BASE BID PRICE) =
$_____

BASE BID: THE BIDDER AGREES TO PERFORM ALL WORK FOR THE ABOVE TRADE, EXCLUSIVE OF ALTERNATE BIDS, FOR THE SUM OF:

_____ DOLLARS ($_____)

Article 5 PCBs

5.1 **Federal Regulations**. There are two primary Federal Laws which affect the disposal of PCB ballasts:

A. Toxic Substances Control Act (TSCA)

B. Superfund Law (Comprehensive Environmental Response, Compensation and Liability Act or "CERCLA")

TSCA states that it is permissible to dispose of non-leaking ballasts in a sanitary landfill, while Superfund prohibits the disposal of more than one pound of PCB's (16 or more ballasts) in a sanitary landfill. Prudent policy would follow the more stringent of the two regulations.

5.2 **TSCA**. TSCA does not regulate the disposal of non-leaking, intact "small capacitors", defined as containing less than three pounds of PCB dielectric fluid. Ballasts contain a small capacitor and are unregulated for disposal.

A. The exceptions to this rule are as follows:

1. If the capacitor or ballast is leaking
2. If the asphalt potting material inside the ballast contains PCB's in excess of 50 ppm.

B. If a ballast meets either criteria, it must be disposed of by incineration in a TSCA approved facility or a chemical waste landfill. For practical reasons it is better to incinerate them.

5.3 **Superfund Laws**. Under superfund laws, PCB's are listed as a hazardous substance. The release or "threat of release" of more than one pound of PCB's into the environment triggers a superfund notification and cleanup requirement.

Since 16 ballasts collectively contain roughly one pound of PCB's, a conservative interpretation is that 16 or more ballasts in a landfill triggers a superfund action.

5.4 **State Regulations**. It is recommended that the State Environmental Protection Agency be contacted for specific requirements for each project.

5.5 **Identifying PCB Ballasts**. Nearly all ballasts made prior to 1979 contain PCB's. Ballasts made after July 1, 1978 that do not contain PCB's are required to be clearly marked "No PCB's".

Most ballasts contain a date stamp in the metal base plate. Look for both the date stamp and the “No PCB’s” marking. Unmarked ballasts should be classed as PCB ballasts. Sort PCB vs Non-PCB ballasts because of the difference in disposal or recycling cost.

5.6 Identifying Leakers . Most leaks are visible. If oil is visible on the surface of the ballast, it is a leaker. PCB oil is either clear or yellow. The presence of asphalt may indicate a leaker but is not a positive indication. If in doubt, treat as PCB contaminated.

5.7 Ballast Removal.

A. Wear proper chemical resistant protective gloves and clothing.

1. Clip off wire leads on the ballast as close as possible to the ballast.
2. Pack ballasts in steel drums and label. Most people use 55 gallon drums.
3. Leakers should be placed individually in double plastic bags before putting in drums.

B. A drum can hold approximately 200 ballasts, but loaded drum weight should not exceed 750 pounds for safety purposes.

5.8 Drum Labeling . Check with the Illinois Environmental Protection Agency for latest requirements.

5.9 Disposal.

A. Options
1. Chemical waste landfill (recommended with reservations)
2. Whole ballast incineration in PCB incinerator (recommended)
3. Capacitor removal/incineration and recycling (recommended)

B. Waste Manifests - the contractor shall submit all waste manifests to CDB with their respective pay requests.

5.10 PCB Leaks.

Because of the small amount of PCB’s in a ballast, notification is not required, unless the leak is into surface waters, sewers or drinking water. All leaks must be cleaned up and area decontaminated. All solvents, rags and other materials used in the cleanup must be properly disposed of as PCB waste.

5.11 References.

A. Sample Specification Section 02 84 00 - PCB Containing Equipment Removal and Disposal